REPORT

OF THE

BOTANICAL AND FORESTRY DEPARTMENT

FOR THE YEAR

1935

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Appendix N.

HONG KONG.

REPORT ON THE BOTANICAL AND FORESTRY DEPARTMENT FOR THE YEAR 1935.

General.

The weather during the first three quarters of the year was generally favourable for both gardening and forestry operations; during the fourth quarter winter season planting was much delayed by rain, which destroyed large numbers of seedlings.

2. The rainfall for the year, as recorded by the gauge in the New Garden, was 76.34 inches in 148 days as against 93.39 inches in 132 days in the preceding year.

3. Typhoon signals were hoisted on four occasions during the year; fortunately no damage was done to gardens or roadside trees by either of the gales which approached the Colony.

Gardens, Parks and Grounds.

4. *Botanic Gardens.*—On May 6th and 7th the occasion of the Celebration of the Silver Jubilee of His late Majesty King George V the Old Garden was illuminated under the direction of the Silver Jubilee Committee and was kept open to the public until 11 p.m. Large numbers of people entered the garden on both days and made good use of the slopes above Upper Albert Road from which a good view of both night and day processions could be obtained. This was the only occasion during the history of the Botanic Gardens, on which hawkers were allowed to enter and many took advantage of the opportunity. No damage was done to trees, shrubs or turf on either day.

5. A very old tree of *Eucalyptus tereticornis*, Sm. below the Aviary, which had been stripped of almost the whole of its smaller branches by gales, was felled; six feet of the main trunk were left and covered by plants of the Spider Orchid, *Renanthera coccinea*, Lour.

6. The total number of trees, shrubs and pot plants sold during the year was 1,684.

7. *Colonial Cemetery.*—Five of the old burial terraces were levelled, returfed and reconditioned generally. A number of large trees were removed from various burial areas in order to prevent damage to monuments and headstones.

8. *Kowloon Hospital Grounds.*—Pine Tree Caterpillars (*Dendrolimus punctatus*) appeared in the small grove of *Pinus Massoniana*, Lambert, in February; over one hundred pounds of the insects were collected and destroyed.

9. New quarters and a store were built during the year by the Public Works Department; the gardeners, who have been partly accommodated in the watchmen's quarters and a rented house since the grounds were taken over by this Department in 1928, were transferred to their new quarters in December.

10. *Government House; Mountain Lodge; Government Bungalow; Colonial Secretary's Residence; The Eyrie; Homestead Quarters; Government Pavilions and Villas; Victoria Hospital; Cenotaph Plots; Statue Square Plots; Government Offices; Defence Corps Headquarters; West End Park; Civil Hospital; Mental Hospital; Leighton Hill Quarters; Indian School; Royal Observatory; Kowloon Magistracy* and *King's Park.* The areas of ground under the control of this Department at the places mentioned were kept in good order generally; additional trees and shrubs were planted where possible; stocks of pot plants were maintained; trees, shrubs, flower beds and grass lawns were given such attention as they required.

Herbarium and Library.

11. During the year 476 plant specimens were sent out. The total number of books added to the library was 119 and of bulletins 654, of these 98 books were purchased, among them 30 of the earlier volumes of Curtis's Botanical Magazine, a very valuable work; all other publications were received as donations from botanists who have made use of the library and herbarium and from various institutions outside the Colony. The Prison Department rebound 344 old volumes. Glass fronts were fitted to 11 old bookcases and 6 new ones were added. The new library catalogue, which has been in course of preparation over a long period, was completed.

Forestry.

12. *Formation of Pine Tree Plantations.*—Extensive areas were dealt with during the year, the number of sowings, in situ, of seeds of *Pinus Massoniana*, Lam., both on the Island and mainland was 273,852, an increase of approximately 41,000 over the previous year. The principal areas planted by this method were Mount Collinson, Taipo Kau Forestry Reserve, Fung Mun Gap, Ngau Tau Kok and Red Hill, Tytam.

13. On grassy areas, where good results are usually obtained, seeds of *Pinus Massoniana*, Lam., were sown by the broadcast method; the total weight of seeds used was 3,591 pounds.

14. *Broad-leaved Trees Planted.*—Tree nurseries where stocks are raised for this work are maintained at Cheung Chau, Little Hong Kong, Taipo Kau and Kowloon Tsai. Plantations of varying sizes, composed of the following trees, were formed in reserves and suitable areas in all parts of the Colony:—*Albizzia Lebbek*, Benth., *Tristania conferta*, Griff., *Acacia pennata*, Willd., *Aleurites Fordii*, Hemsl., *Aleurites triloba*, Forst., *Aleurites montana*, Wils., *Cassia glauca*, Lam., *Acacia confusa*, Merr., *Melia Azedarach*, Linn., *Artocarpus hypargyraea*, Hance, *Bauhinia variegata*, Linn., *Bauhinia Blakeana*, Dunn, *Cunninghamia sinensis*, R. Br., *Cassia corymbosa*, Lam., *Crataeva religiosa*, Forst., *Delonix regia*, Rafin. and *Tutcheria spectabilis*, Dunn, the total number used was 21,500. Most of the species named, with the addition of *Casuarina equisetifolia*, Forst., were also used in the maintenance and extension of the road planting scheme.

15. *Pine Seed Collection.*—The Fan Ling Plantations produced a very good crop of cones, from which 500 pounds of seeds of *Pinus Massoniana*, Lambert, were collected.

16. *Public Playgrounds.*—The shade trees in the *Southorn Playground*, although provided with a very strong type of guard, were again badly damaged and many replacements were necessary during the year; a Bamboo hedge was planted inside the whole length of the eastern boundary of the ground. In the southeast corner an area was enclosed by an unclimbable concrete and barbed wire fence, inside this turf was laid, a rock garden formed, a number of quick growing shade trees planted and space reserved for seating accommodation; it is proposed to remove the fence when the shade trees are of such a size as not to be easily damaged. In *Middle Road Playground, Kowloon*, 40 shade trees were planted, strong guards and an additional protection of wire netting were placed round them; by end of the year 30 replacements were necessary owing to wilful damage and theft.

17. *Insect Pests.*—The Pine Tree Caterpillar (*Dendrolimus punctatus*), which has in past years done serious damage to Pine plantations, appeared only in exceptionally small numbers, this fortunate state of affairs rendered the usual costly process of collection and destruction unnecessary; in the previous year over four tons of the insects were collected and destroyed.

18. *Forest and Hill Fires.*—Twenty fires, the lowest number on record for many years, occurred as against 81 in the previous year; serious damage, the destruction of 600 trees, was done in only one instance.

19. Prior to the Ching Ming and Chung Yeung Festivals, on which days fires are most likely to occur, notices requesting the public to take all possible precautions against setting fire to

plantations, undergrowth and grass, were posted in all parts of the Colony; handbills were also distributed. The vernacular press kindly gave prominence to a notice requesting visitors to hill graves and cemeteries to take precautions against causing damage by fire. No fires occurred on the first and three only on the second of these festival days.

20. *Forest Guards Services.*—Cases of damage to Pine plantations, by theft of mature trees, were numerous throughout the whole year. Forest Guards arrested and charged 202 persons, of these 194 were convicted and 8 discharged. Sixty-one persons, many of them only recent arrivals in the Colony, who had been convicted on two or more occasions, were banished.

21. The Police arrested 262 persons for various forestry offences; 251 were convicted and 11 discharged.

Full particulars of the cases are given in Tables I and II.

22. *Protection of Plantations.*—All fire barriers and forestry paths were cleared and repaired. The service path in Mount Collinson Prohibited Area and the fire barrier above Kowloon Catchwater were extended.

23. *Undergrowth Clearing.*— Anti-malarial undergrowth clearing was carried on in all parts of the Colony and the total area so dealt with was 3,165,535 square feet. For other purposes, such as surveys, formation of roads, water catchments, other public improvements and building sites the areas cleared totalled 365,170 square feet.

24. *Preservation of Local Flora.—Paphiopedilum purpuratum*, one of the most attractive of the local terrestial Orchids, is in danger of complete destruction, chiefly owing to the depredations of plant hawkers, medicinal herb collectors and thoughtless flower pickers; 250 plants were lifted in various parts of the Island and replanted in a prohibited area.

Agriculture, Etc.

25. *Fan Ling Experimental Garden.*—The Citrus plots in the old section of the garden continued to make good progress; 300 young grafted trees of the Chiu Chau Kom were added to the existing plots during the year. Plots of foreign vegetables were cultivated for demonstration purposes and for exhibition at the Annual Show of the New Territories Agricultural Association, which was held at Shek Wu Hui on January 5th and 6th.

26. *Inspection of Nursery Stock and Vegetables.*—The following shipments were inspected and certified as fit for export:—forty-eight of dried and fresh vegetables consigned to Philippine Islands; eighteen of *Narcissus Tazetta*, containing 71,680 bulbs consigned to Britain, Canada and Honolulu; five of Lilium spp. to Britain and the United States of America; fifteen of Sugar Cane, totalling 100,500 pieces, consigned to Singapore and eight small lots of miscellaneous seeds and plants consigned to various countries.

Seed Collection.

27. Seeds of the following were collected for local use and for the purpose of exchange:—*Albizzia Lebbek*, Benth., *Acacia confusa*, Merr., *Acacia Farnesiana*, Willd., *Atalantia Hindsii*, Oliv., *Aleurites Fordii*, Hemsl., *Aleurites montana*, Wils., *Aleurites triloba*, Forst., *Artocarpus hypargyraea*, Hance, *Artocarpus integrifolia*, Linn., *Bauhinia variegata*, Linn., *Bombax Malabaricum*, DC., *Cinnamomum Camphora*, Nees, *Casuarina equisetifolia*, Linn., *Cassia fistula*, Herbb., *Cassia siamea*, Lam., *Cassia corymbosa*, Lam., *Cassia glauca*, Lam., *Callistemon rigidus*, R. Br., *Cupressus macrocarpa*, Hartw., *Celtis sinensis*, Pers., *Caesalpinia minax*, Hance, *Delonix regia*, Rafin., *Eucalyptus tereticornis*, Sm., *Erythrina indica*, Lam., *Garcinia oblongifolia*, Champ., *Gardenia florida*, Linn., *Grevillea robusta*, A. Cum., *Ixora chinensis*, Lam., *Hibiscus Abelmoschus*, Linn., *Iris speculatrix*, Hance, *Leucaena glauca*, Benth., *Liquidambar formosana*, Hance, *Lilium Brownii, var. Colchesteri*, *Melia Azedarach*, Linn., *Melaleuca Leucadendron*, Linn., *Podocarpus chinensis*, Wall., *Phoenix Roebelinii*, O'Brien, *Quercus cornea*, Lour., *Quercus Edithae*, Skan, *Quercus Harlandi*, Hance, *Poupartia Fordii*, Hemsl., *Rhus hypoleuca*, Champ., *Sapium discolor*, Muell-Arg., *Strychnos angustiflora*, Benth., *Sterculia lanccolata*, Cav., *Tristania conferta*, Griff and *Tutcheria spectabilis*, Dunn.

Exchange of Seeds, etc.

28. The Department is indebted to the following donors of seeds, plants, etc:—The Conservator of Forests, Sandakan, North Borneo; The Director, Botanic Garden of the Imperial University, Taihoku, Formosa; The Director of Agriculture, Macau; The Director, Botanic Gardens, Dr. Sun Yat-sen's Memorial Park, Nanking; The Board of Commissioners of Agriculture and Forestry, Honolulu, Hawaii; Dr. G. A. C. Herklots; Mrs. R. E. Hoare; Messrs. Kunst and Albers; Professor Woon Yung Chun, Director, Botanical Institute, Sun Yat-sen University, Canton; Messrs. D. T. Fleming (Hawaii); J. T. Bagram; C. H. Tredwell (New Zealand); A. Tse; G. H. Vernon (Thursday Island); F. J. Ludowici (Sydney); F. P. de V. Soares and Liu Ying.

Table II.

Police Court Results.

Case.	*1935*	*1934*
50 cents fine	—	1
$ 1 to $ 5 fine	5	15
$ 6 to $10 ,,	7	4
$11 to $25 ,,	5	11
1 to 7 days imprisonment	4	5
8 to 14 ,, ,,	21	27
15 days ,,	—	1
3 weeks ,,	18	14
4 ,, ,,	66	25
5 ,, ,,	1	—
6 ,, ,,	28	11
8 ,, ,,	5	3
10 ,, ,,	1	—
12 ,, ,,	—	1
Discharges	8	4
Cautions	8	30
Caned (Juvenile)	1	1
Bound over	24	—
Total	202	153

Table III.

Comparative Statement of Revenue, 1934 & 1935.

Revenue	1934	1935
	$	$
Timber Sales	1,994.69	2,032.03
Plant Sales	777.33	715.44
Loan of Plants	112.84	101.28
Forestry Licences	10,259.06	10,341.50 (A)
Forfeiture	218.50	—
Sale of Condemned Stores	7.16	20.24
Overpayments in Previous Years	—	1.22
Other Miscellaneous Receipts	714.44	575.31 (B)
Total	14,084.02	13,787.02

(A) Collected by District Officers.

(B) Including $555 for Inspection of Nursery Stock as against $700 in 1934.

Table IV.

Comparative Statement of Expenditure and Revenue for the past ten years.

Year.	Personal Emoluments & Other Charges.	Special Expenditure.	Total Expenditure.	Total Revenue.
	$	$	$	$
1926.....	87,757.80	2,230.21	89,988.01	10,798.95
1927.....	95,722.45	—	95,722.45	7,861.76
1928.....	99,178.99	—	99,178.99	8,849.35
1929.....	101,146.23	—	101,146.23	11,885.97
1930.....	120,565.39	3,809.67	124,375.06	12,376.46
1931.....	121,189.43	—	121,189.43	11,717.67
1932.....	122,041.57	—	122,041.57	17,028.99
1933.....	125,762.43	999.64	126,761.87	17,634.96
1934.....	127,403.14	—	127,403.14	14,084.02
1935.....	117,447.55	—	117.447.55	13,787.02

Table V.

Comparative Statement of Expenditure for 1934 & 1935.

Expenditure	1934	1935
	$	$
Personal Emoluments	80,738.57	75,718.05
Other Charges.		
Brushwood Clearing	6,997.70	6,932.00
Conveyance Allowances	2,017.18	2,326.55
Expenses of Collections	198.85	200.00
Field Allowances to Foresters	652.67	695.68
Forestry	15,987.85	13,648.47
Forestry Reserve, Taipo Kau	3,985.45	2,641.88
Incidental Expenses	349.42	347.95
Library	299.91	846.19
Light	285.23	292.16
Maintenance of Gardens	10,973.21	9,155.02
Protection of Plantations	1,444.09	1,393.76
Transport	1,517.69	1,310.31
Uniform & Accoutrements	995.64	961.80
Upkeep of Car	959.68	977.73
Total Other Charges	46,664.57	41,729.50
Total Botanical & Forestry Dept.	127,403.14	117,447.55